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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

POTHIER, DENISE M

ART UNIT	PAPER NUMBER
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3764

DATE MAILED: 01/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/625,792

Applicant(s)

BOCHE, HARTMUT

Examiner

Denise M Pothier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 7, 10 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 9 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species A, Figures 1-3 in Paper No. 8 is acknowledged. The traversal is on the ground(s) that claims 2 and 6 are also generic since Figure 4 shows an alternative embodiment of Figures 1-3 that still includes the undercut shown in Figure 3 as described on page 15, lines 20-24. This is found persuasive and claims 2 and 6 are being examined. Claims 7, 10 and 15 are withdrawn from further consideration since the limitations in these claims drawn towards nonelected species.

The requirement is still deemed proper and is therefore made FINAL.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The disclosure is objected to because of the following informalities: recess 34 on page 14, line 10 should be recess 24 and "transponder" on page 15, line is misspelled.

Appropriate correction is required.

Claim Objections

4. Claims 1-6, 8-9 and 11-14 are objected to because of the following informalities: the use of the word "non-contact" in claim 1 is grammatically awkward. To overcome this rejection, Applicant should recite – wireless --. Appropriate correction is required.
5. The remaining claims are objected to because they depend from an objected claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Storz (WO 98/04185). Storz discloses on sheet 1 a medical instrument having an instrument body (1), a recess in the instrument body (notch in 1 where 4 and 5 are

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placed in 3), a non-contact or wireless readable data carrier (i.e. 4 or 5) embedded in the recess (see sheet 1) and means arranged between the data carrier and the recess by which means the data carrier is floatingly embedded within the recess (see element 3 on sheet 1). Specification states on page 4 that "float-embedded" means that the data carrier is mounted in the recess without direct, imminent contact with the instrument body. Structure 3 prevents data carriers from being in direct, imminent contact with the instrument body (1).

As for claims 2 and 6, Irion discloses on sheet 1 two undercuts (angled part of 3 below 4 and 5) as part of the recess in at least one partial region and the data carriers (4 and 5) are nonremovably disposed in the undercut.

As for claims 3 and 6, Irion discloses structure 3 is a means and includes an embedded medium.

8. Claims 1-3, 6 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Irion (6,364,827). Irion discloses in Figure 1 discloses a medical instrument having an instrument body (1), a recess in the instrument body (notch in 1 where 4 and 8-10 are placed in 3 in Figure 1), a non-contact or wireless readable data carrier (i.e. 4 or 9) embedded in the recess (see Fig. 1) and means arranged between the data carrier and the recess by which means the data carrier is floatingly embedded within the recess (see element 3 in Fig. 1). Specification states on page 4 that "float-embedded" means that the data carrier is mounted in the recess without direct, imminent contact with the instrument body. Structure 3 prevents data carriers from being in direct, imminent contact with the instrument body (1).

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As for claims 2 and 6, Irion discloses in Figure 1 two undercuts (angled part of 3 below 4 and 8-10) as part of the recess in at least one partial region and the data carrier 4 is partially and data carrier 9 is completely and nonremovably disposed in the undercut.

As for claims 3 and 6, Irion discloses structure 3 is a means and includes an embedded medium.

As for claim 14, Irion discloses in Figure 1 and column 4, lines 11-23 that the data carrier (9) includes an antenna (8 and 10).

9. Claims 1, 3, 9 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Inagaki (4,471,786). Inagaki discloses a medical instrument having an instrument body (1), a recess in the instrument body (see rectangular recess in Figure 1), a non-contact or wireless readable data carrier (26) embedded in the recess (see Figure 1) and means arranged between the data carrier and the recess by which means the data carrier is floatingly embedded within the recess (see Fig. 1 and column 5, lines 16-40 and col. 5, l. 59 – col. 6, l. 2). Specification states on page 4 that “float-embedded” means that the data carrier is mounted in the recess without direct, imminent contact with the instrument body. Column 5, lines 16-40 and column 5, line 59 – column 6, line 2 prevents data carrier 26 from being in direct, imminent contact with the instrument body.

As for claim 3, Figure 1 shows and column 5, lines 29-32 describe a means that includes an embedded medium (layer 29).

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As for claim 9, the means of Inagaki also described in column 5, lines 22-26 at least one spacer (27).

As for claim 12 due to the difference in materials as shown in Figure 1 of Inagaki, the recess is made visually recognizable in the region of the outer surface.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-3, 5-6, 8-9, 11-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno (4,274,423) in view of Hoek (6,312,380). Mizuno discloses a medical instrument having an instrument body (10,11), a recess in the instrument body (see notch in Figure 3), a readable data carrier (14) embedded in the recess (see Fig. 3) and means arranged between the data carrier and the recess by which means the data carrier is floatingly embedded within the recess (see 21, 22 in Fig. 3 and col. 5, l. 52 - col. 6, l. 4). Specification states on page 4 that "float-embedded" means that the data carrier is mounted in the recess without direct, imminent contact with the instrument body. Structures 22 and 13 prevent data carriers from being in direct, imminent contact with the instrument body (10). Mizuno discloses that the data carrier senses the pressure in the body, a physiological characteristic. However, Mizuno does not disclose the data carrier is a non-contact (that is wireless) data carrier. Hoek teaches in column

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1, lines 26-44 that it is known in the medical instrument art that measures physiological characteristics, including pressure (col. 1, l. 27), to make the devices with a wireless data carrier in order to reduce costs and technical difficulties (size, structural integrity, sensor performance) that result from guide wires connected to sensors in small probes. Thus, one having ordinary skill in the art would have known to make the data carrier of Mizuno a wireless data carrier in order to reduce the costs of the instrument and to overcome technical limitations of the wired data carrier.

As for claims 2 and 6, Figure 3 of Mizuno shows the recess includes an undercut (see angled walls) in at least one partial region and the data carrier is nonremovably disposed in the undercut.

As for claims 3 and 6, column 6, lines 1-4 and Figure 3 of Mizuno disclose and show the mean is an embedded medium (silicone rubber).

As for claim 5, Mizuno discloses the instrument is made from stainless steel (see col. 7, l. 1-2) and that the medium is made from silicone rubber (col. 6, l. 1-4). Mark's Standard Handbook for Mechanical Engineers states that the elasticity of modulus for stainless steel is 27.6 msi (Table 5.1.3) and Mechanics of Materials (Gere and Timoshenko) states the elasticity modulus for steel is between 28-30 msi and for rubber is between 0.1 and 0.6 msi (Table H-2). As such, Mizuno inherently discloses the embedded medium (silicone rubber) has an elasticity modulus smaller than elasticity modulus of the instrument body.

As for claim 8, see claim 5 above regarding the materials of the instrument and embedded medium. Mark's Standard Handbook for Mechanical Engineers states that

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the heat conductivity for steel is 26.2 (Table 4.4.1) and for soft rubber is 0.08. Thus, Mizuno inherently discloses the heat conductivity of the embedded medium is smaller than that of the instrument.

As for claim 9, Figure 3 of Mizuno show the means includes at least one spacer (13).

As for claim 11, Figure 3 of Mizuno shows a recess that comprises an opening (around 12), which forms a window on the outer surface of the instrument body.

As for claim 12 since the material around the recess is different from the outer surface of the instrument as shown in Figure 3 of Mizuno, the recess is visually recognizable in the region of the outer surface.

As for claim 14 as stated above Hoek teaches the desire to make the data carrier wireless. In addition, Hoek teaches in column 3, lines 55- column 4, line 20 that the data carrier includes a transmitter and receiver (i.e. transponder with an antenna). Thus for the reasons stated above, one having ordinary skill in the art would have known to include a transponder with an antenna.

12. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno in view of Hoek as applied to claim 3 above, and further in view of Edwards (5,456,682). Mizuno also teaches in column 6, line 51 that the instrument is also made from a woven Dacron. Dacron is made from a polyethylene material. Ashby discloses polyethylene is classified in the engineering polymer region on page 35 and shows the elasticity of modulus for HDPE and LDPE on page 37 to be below epoxy and ceramics. Mizuno also discloses the embedded medium in column 5, lines 66 – column 6, lines 25 is used

to electrically isolate and to provide safety to the data carrier. However, Mizuno does not disclose an embedded medium other than silicone rubber. Edwards teaches in column 7, lines 43-51 a potting compound to encapsulate and insulate a sensor of medical probe that includes a loctite material. Loctite is a ceramic material. Ashby discloses on pages 34 and 37 that the ceramic have higher elasticity modulus than engineering polymers. Thus, one having ordinary skill in the art would have known to substitute the silicone rubber encapsulated material for a loctite-potting compound in order to isolate the data carrier of Mizuno. As such, the embedded medium would have a larger elasticity modulus than the instrument body in order to properly isolate the sensor electrically.


13. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Storz in view of Yunoki (4,686,964). Storz disclose a wireless data carrier used with an endoscope. However, there is no discussion to surround the data carrier by a glass casing. Yunoki teaches in the abstract to surround sensors of an endoscope with a casing in order to shield the sensor from external electromagnetic effects. Thus, one having ordinary skill in the art would have known to surround a sensor with a casing in order to shield the sensor from external electromagnetic effects. Additionally, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select a glass casing to surround the data carrier, since it has been held to be within the general skill or a worker in the art to select a known material on the basis of its suitability for the intended use. Glass is a material used to shield against electromagnetic effects and is suitable for the purposes taught by Yunoki.

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14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hochman (4,515,167) and Besson (5,862,803) disclose a medical instrument an embedded sensor (17,17') with a wireless data carrier. Crimmins (5,621,384) discloses a medical instrument that wireless transmits information regarding a patient. Lele (4,960,109) and Millar (5,902,248 and 5,431,628) discloses medical instruments with embedded sensors. Okada (5,653,677) and Nagasaki (4,633,304) disclose wireless embedded sensors in endoscopes. Dermody (3,700,628) discloses different materials used to encapsulate sensors placed in the body.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise M. Pothier whose telephone number is 703.308.0993. The examiner can normally be reached on Monday-Thursday and alternate Fridays. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be **directed to the receptionist** of Technology Center 3700, whose telephone number is (703) 308-1148.



Denise Pothier
Primary Examiner
January 8, 2003